

Angle of Refraction, which is therefore $53^{\circ} 35'$ min. and its Sine 8047. These are the Sines of Incidence and Refraction of the mean refrangible Rays, and their proportion in round numbers is 20 to 31. This Glass was of a colour inclining to green. The last of the Prisms mentioned in the third Experiment was of clear white Glass. Its refracting Angle $63\frac{1}{2}^{\circ}$ degrees. The Angle which the emergent Rays contained, with the incident $45^{\circ} 50'$ min. The Sine of half the first Angle 5262. The Sine of half the Summ of the Angles 8157. And their proportion in round numbers 20 to 31 as before.

From the Length of the Image, which was about $9\frac{3}{4}$ or 10 Inches, subduct its Breadth, which was $2\frac{1}{8}$ Inches, and the Remainder $7\frac{3}{4}$ Inches would be the length of the Image were the Sun but a point, and therefore subtends the Angle which the most and least refrangible Rays, when incident on the Prism in the same Lines, do contain with one another after their Emergence. Whence this Angle is $2^{\circ} 0' 7''$. For the distance between the Image and the Prism where this Angle is made, was $18\frac{1}{2}$ Feet, and at that distance the Chord $7\frac{3}{4}$ Inches subtends an Angle of $2^{\circ} 0' 7''$. Now half this Angle is the Angle which these emergent Rays contain with the emergent mean refrangible Rays, and a quarter thereof, that is $30' 2''$ may be accounted the Angle which they would contain which the same emergent mean refrangible Rays, were they co-incident to them within the Glass and suffered no other Refraction then that at their Emergence. For if two equal Refractions, the one at the incidence of the Rays on the Prism, the other at their Emergence, make half the Angle $2^{\circ} 0' 7''$ then one of those Refractions will make about a quarter of that Angle, and this quarter added to and

and subducted from the Sines of Incidence and Refraction of the mean refrangible Rays, the Sines of Refraction of the most and least refrangible Rays, will be 54 deg. $5' 2''$, and 7995, the Sines of $15'$ and its Sine numbers are in to 50.

Now if you find from the Sines of $27'$ and $28'$ shew of the least refrangible ones, the difference of the Refraction of the most and least refrangible Rays, the fraction of the mean

Whence they understand, that the distance of the Object-Glass from the Parallel Rays, is about the thickness of the Glass, or that the Focus of the Object-Glass is about the $27\frac{1}{2}$ th of the Glass and the Focus

And if Rays of light fall in the Axis of an Object-Glass, of the Lens to converge at the Lens, the Focus will be nearer to the Lens than the other ones, by a distance of the Focus of the Lens as the distance